

## Tests:

### Backend Tests:

1. time of computing on BACKEND ONLY – the time from when rabbitmq passes to the backend to when rabbitmq receives the backend answer
  - for single driver (2 stops, 10 stops, 25 stops, 50 stops)
  - for 2, 5, 10 drivers, time of backend for 15 stops
2. Comparing Backend output to a Google maps potential output (checking how similar our tool is to google, in theory google is extremely close to optimal, we want to be close) - > only possible for single tsp
3. The 3 Boolean flags, test that backend is adjusting for them. Example: for avoid highways – make a route that makes sense to use a highway. Then turn off the highways feature. Make sure the backend is now creating a route without the highway involved. Do for ferries and tolls too.
4. Load management → get like 6 devices that all make a request simultaneously? What happens when this occurs.
5. Server → is the only allowable IP the vercel server?

### Database Tests:

1. Invalid password
2. repeating email
3. session tests (does session end at logout? Can a user be logged in simultaneously on two machines?)
4. Can you recover your password?
5. Can you sign in with google?
6. Can you delete your account?
7. Can the database handle infinite accounts? How many? How does it restrict infinite account creation?

### CREDITS:

1. What is the default credit upon account creation?
2. Can you add credits?
3. Do credits increment / decrement appropriately?
4. Whats the max number of credits you can have?

### SAVING / RELOADING / EXPORTING:

1. Can you save / reload a route?
2. How do credits change with saving/reloading?
3. How many routes can you save?
4. Can you export infinite routes? Does this cost credits?

### ROUTING ON DASHBOARD:

1. Single driver → 1 stop? 2 stops? 5 stops? 10 stops? 25 stops? 50 stops? 51 stops?
2. Multi driver → 1 stop? 2 stops? 5 stops? 10 stops? 25 stops? 50 stops? 51 stops?
3. booleans → do they work
4. returns home, does it work?
5. what happens when a spot is unreachable (iqaluit) example
6. locations outside of north america
7. crossing the border?
8. not utilizing all the drivers?

9. 11 drivers?
10. deleting a stop after route already calculated?
11. adding a stop after route already calculated?
12. changing the boolean flags after already calculating a route?
13. time: from the moment you hit 'calculate route' to the moment the response is fully displayed (for single and multi driver, 1, 2, 10, 25, 50 stops each)?
14. logout works?
15. fleet, add/remove vehicles?